AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A base station controller system communicatively coupled to a core network, said base station ~~control~~ controller system comprising:

   a plurality of resource pools to support wireless communication with a plurality of wireless access terminals, each said resource pool performing a defined call processing function;

   a switching fabric to provide redundant and independent access to each of said resource pools such that resources from each said resource pool are independently selectable from resources in other said resource pools by configuring said switching fabric; and

   a system controller to configure said switching fabric to selectively allocate resources from said resource pools to communicatively connect said wireless access terminals with the core network.

2. (Original) The base station controller system of claim 1 wherein said switching fabric comprises a distributed ATM switching fabric.

3. (Original) The base station controller system of claim 1 wherein said distributed ATM switching fabric comprises:

   a centralized ATM switching resource communicatively coupled to said system controller and at least one distributed ATM switching resource;

   said at least one distributed ATM switching resource providing redundant communication links between said resource pools and said centralized ATM switching resource.

4. (Original) The base station controller system of claim 1 wherein said resource pools comprise front haul exchange termination resources to communicatively couple with a mobile switching center in the core network.

5. (Original) The base station controller system of claim 1 wherein said resource pools comprise service option element resources to provide vocoding and echo cancellation functions for voice calls.

6. (Original) The base station controller system of claim 1 wherein said resource pools comprise selector element resources to provide radio link management and protocol support for voice, data, and packet data calls.

7. (Original) The base station controller system of claim 1 wherein said resource pools comprise packet network exchange termination resources to communicatively couple with a packet data serving node in the core network.

8. (Original) The base station controller system of claim 1 wherein said resource pools comprise back haul exchange termination resources to communicatively couple with at least one radio base station providing RF communication to support calls to and from said plurality of said wireless access terminals.

9. (Original) A base station controller system comprising:

a plurality of resource pools, each said resource pool comprising resources supporting at

least one call processing function; and

a system controller to allocate selected combinations of specific resources from one or more

of said plurality of resource pools to provide desired call processing for respective ones

of calls to and from a plurality of wireless access terminals;

said base station controller organized as:

a hub subrack comprising a central switching resource and said system controller; and

at least one processing subrack to carry said plurality of resource pools, each said

processing subrack comprising resources from each of said plurality of resource

pools, and further comprising switching resources to communicatively couple said

processing subrack to said hub subrack.

10. (Original) The base station controller system of claim 9 wherein said switching resources on

each said processing subrack and said central switching resource on said hub subrack together

comprise a switching fabric to communicatively couple said hub subrack with each of said

processing subracks.

11. (Original) The base station controller system of claim 10 wherein said switching fabric

comprises:

a communication switch on said hub subrack;

a communication switch on each said processing subrack; and

a plurality of communication links between said communication switches on said processing

subracks and said communication switch on said hub subrack.

12. (Original) The base station controller system of claim 11 wherein said communication links between each said processing subrack and said hub subrack comprise redundant first and second communication links.

13. (Original) The base station controller system of claim 12 wherein each said communication switch on said hub subrack and each said processing subrack comprises redundant primary and secondary communication switches for switching said first and second communication links, respectively.

14. (Original) The base station controller system of claim 13 wherein said switching fabric comprises a primary switching fabric and a redundant secondary switching fabric, said primary switching fabric comprising said first communication links and said first communication switches, and said secondary switching fabric comprising said second communication links and said second communication switches.

15. (Original) The base station controller system of claim 11 wherein said communication switches on said hub subrack and each said processing subrack comprise one of a set of ATM switches, Ethernet switches, or Internet Protocol (IP) switches.

16. (Original) The base station controller system of claim 9 wherein each said mixed-architecture processing subrack comprises a percentage of an overall call processing capacity of said base station controller system, and further wherein the overall call processing capacity of said base station controller system may be scaled based on adding additional ones of said processing subracks.

17. (Original) The base station controller system of claim 9 wherein said system controller comprises at least one general processing board operative to configure said central switching resource on said hub subrack and said switching resources on at least one of said processing subracks to select combinations of specific resources from one or more of said plurality of resource pools for each call routed through said base station controller.

18. (Original) The base station controller system of claim 17 wherein said system controller comprises a processing subsystem configured to optimize resource selections such that resource assignments comprising said selected combinations of resources from said one or more of said plurality of resource pools are selected from a minimum number of said processing sub racks.

19. (Original) The base station controller system of claim 9 wherein said plurality of resource pools comprise:

> front haul exchange termination resources to provide a plurality of front haul communication links with an associated mobile switching center, each said front haul communication link carrying call traffic for at least one call between said base station controller system and the associated mobile switching center;

> back haul exchange termination resources to provide a plurality of back haul communication links with at least one radio base station, each said back haul communication link carrying call traffic for at least one call between said base station controller system and at least one radio base station in wireless communication with at least one wireless access terminal involved in said at least one call;

> selector element resources to provide radio link management for calls being routed through said base station controller; and

> service option element resources to provide selected signal processing functions, including voice coding and decoding and echo cancellation functions for calls being routed through said base station controller.

20. (Original) The base station controller system of claim 9 wherein said resource pools further comprise packet core network exchange termination resources to route packet data calls to and from one or more of the plurality of wireless access terminals to an external packet data network.

21. (Previously Presented) A method of structuring a base station controller system wherein call processing for each call being routed through the base station controller comprises performing a plurality of call processing functions, the method comprising:

> providing a plurality of resource pools, each one of said resource pools providing one of the plurality of call processing functions;

> providing redundant and independent access to each said resource pool by interconnecting said plurality of resource pools through a configurable switching fabric; and

> allocating a specific combination of resources selected from one or more resource pools in said plurality of resource pools to each call being routed through said base station controller by configuring said switching fabric.

22. (Original) The method of claim 21 further comprising organizing the base station controller system as a rack system comprising:

> a hub subrack providing centralized switching resources; and

> one or more processing subracks, each said processing subrack carrying at least a portion of each said resource pool and rack switching resources to interface with said hub subrack.

23. (Original) The method of claim 22 further comprising increasing a call processing capacity of the base station controller system based on adding additional ones of said processing subracks as needed.

24. (Original) The method of claim 22 further comprising optimizing resource assignments for a given call being routed through the base station controller system by assigning specific resources from one or more said resource pools to minimize the number of said processing subracks used to support the given call.